

LNG REFUELLING

WHAT TRUCK DRIVERS NEED TO KNOW

OMV TRAINING DOCUMENT AND SAFETY GUIDELINES

OMV LNG – NEW ENERGY FOR NEW MOBILITY

These guidelines provide an overview of how to safely refuel with LNG at the OMV terminal in Himberg as well as information on the following topics:

- ▶ The composition of LNG
- ▶ Layout of the OMV filling station in Himberg
- ▶ Refuelling process instructions
- ▶ Emergency and safety information
- ▶ Authentication – what do you need for the refuelling process?

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1. INTRODUCTION

OMV LNG – new mobility for trucks in long-haul transport

Liquefied natural gas (LNG) is a promising fuel for trucks and buses. Due to competition, longhaul fleets are under pressure to keep costs low and cover large distances in the shortest time possible. The new OMV LNG terminal in Himberg offers a cost-effective alternative to conventional fuels.

LNG: a fuel with extraordinary benefits

- ▶ With a maximum range of 1,200 km or more, the only competitive, mature alternative fuel for trucks in longhaul transport
- ▶ High-performance fuel with 25% less CO₂, 50% less noise, 90% less nitrogen oxide and virtually no sulphur oxides or fine particles compared to diesel (as of 05/2020)
- ▶ High-quality product due to the use of 100% H-gas

2. WHAT EXACTLY IS LNG?

An efficient fuel for a new form of mobility:

Liquefied methane (natural gas), which occurs at a temperature of $-162\text{ }^{\circ}\text{C}$, a so-called cryogenic (i.e., very low-temperature) liquid.

Its properties

- ▶ Clear and odourless
- ▶ It vaporises quickly when spilled
- ▶ Non-corrosive and non-toxic
- ▶ 600 times more compact in liquid form than in gas form
- ▶ A fuel that has been safely used and efficiently stored for the past 50 years (density of natural gas to LNG = 1 : 600)
- ▶ With up to 25% less CO₂ and 90% less NO_x
- ▶ Virtually no fine particles/particulate
- ▶ Lower consumption than that of a comparable diesel vehicle
- ▶ Easy to transport

WARNING!

- ▶ LNG spillage in a closed space can lead to asphyxiation!
- ▶ Avoid any ignition sources, as LNG is flammable in vapour form.
- ▶ LNG can explode if vented in a closed space.

ONLY TRAINED AND CERTIFIED DRIVERS ARE PERMITTED TO REFUEL AT THE OMV FILLING STATION IN HIMBERG

1. HAVE YOU BEEN TRAINED ACCORDINGLY AND DO YOU HAVE A TRAINING CERTIFICATE?
2. IF NOT, ARRANGE A TRAINING APPOINTMENT ON +43 1 40440 26026. (AVAILABLE 24 HOURS A DAY).
3. READ THE FOLLOWING TRAINING DOCUMENTS
4. WATCH THE VIDEO ON THE WEBSITE: WWW.OMV.AT/LNG
5. READ ALL THE INFORMATION ON-SITE BEFORE INITIATING THE REFUELLING PROCESS
6. MAKE SURE THAT YOU UNDERSTAND ALL THE STEPS OF THE REFUELLING PROCESS
7. IF YOU WOULD LIKE TO OBSERVE THE REFUELLING PROCESS AGAIN, YOU CAN WATCH THE TRAINING VIDEO ONLINE AT ANY TIME.

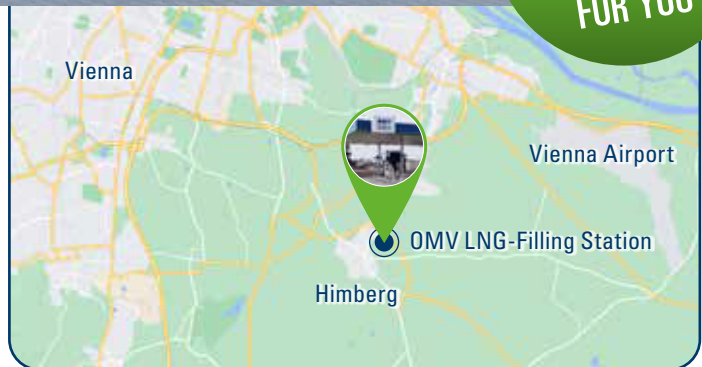
3. OUR LOCATION



How to find us

OMV LNG filling station Himberg
Rauchenwartherstraße 13a, 2325 Himberg

- ▶ GPS: 48.08440, 16.45713
- ▶ 17 km to Vienna Airport
- ▶ 20 km from the Vienna city centre



210 LNG filling stations throughout Europe

The number of LNG filling stations is growing annually, as all EU member states are required to build an LNG infrastructure for strategic routes.



4. OMV SAFETY INFORMATION

PLEASE OBSERVE THE FOLLOWING TO ENSURE SAFE REFUELLING

1. **Smoking is strictly prohibited**
2. **Do not use any electronic devices during the refuelling process**
3. **Ignition sources and open flames are strictly prohibited**

AVOID DIRECT CONTACT WITH THE SKIN

LNG is stored at a temperature of approximately -160 °C, which is why the nozzle, the pipes at the filling station, and the exposed LNG pipes can be very cold. Direct contact with these surfaces or the LNG itself can result in serious burns or frostbite.

Exposed areas of the skin must be covered!

If direct contact with the skin occurs, soak and rinse the burned or frostbitten skin in lukewarm water for at least 15 minutes.

Do not rub or remove any articles of clothing that have frozen onto the skin.

If blisters form on the skin, cover them with a sterile or similar bandage.

Otherwise, treat the cryogenic burn like any other normal burn and seek medical attention immediately.

AVOID CONTACT WITH THE EYES

If you wear contact lenses, remove them if possible. Otherwise, leave your eyes open and rinse them with lukewarm water for at least 15 minutes. **Seek medical attention immediately!**

AVOID INHALATION

If you suffer from a respiratory disease or are experiencing difficulty breathing, vacate the area of the source or cloud and proceed to a location with fresh air. **Seek medical attention immediately if the symptoms persist!**

AVOID SWALLOWING

In the unlikely event that you ingest LNG, rinse the mouth out with cold water.

WEAR CLOSED-HEEL, CLOSED-TOE SHOES

Reduce the risk of burns or frostbite. Wear closed-heel, closed-toe shoes, long trousers and sleeves, and gloves.

DO NOT EXPOSE ANY MATERIALS TO LNG

Many materials become brittle and break when exposed to cryogenic (very low-temperature) liquids.

THE FIRST REFUELLING PROCESS

The first time you fill the tank with LNG, please do not exceed 6 kg. Then drive the vehicle for 10 to 15 minutes to allow the LNG tank to cool and the local pressure inside the tank to drop below 10 bar/150 psi. Then continue with the refuelling process as described.

INITIATE THE REFUELLING PROCESS IMMEDIATELY

Once your PIN has been accepted at the payment terminal, you will have a limited period of time to start the refuelling process.

IN THE EVENT OF A FIRE

You should never attempt to extinguish an LNG fire unless you are trained to do so and there is no risk of personal injury.

- ▶ **Use only dry chemical fire extinguishing agent type B.**
- ▶ **Never use water to extinguish an LNG fire.**



4. OMV SAFETY INFORMATION

PLEASE OBSERVE THE FOLLOWING TO ENSURE SAFE REFUELLING

If you ever feel unsafe in a certain situation, vacate the location and dial **112 for emergency services**.

Call the OMV malfunction hotline directly. See the filling instructions on-site or here:

OMV malfunction hotline: +43 (0)1 2119 6411

WHAT TO DO IN THE EVENT OF AN LNG INCIDENT/ACCIDENT:

- ▶ Inform the vehicle operator or owner.
- ▶ Inform everyone in the vicinity and evacuate everyone within a radius of 100 metres of the scene of the accident.
- ▶ Consider any potential ignition sources such as cars in the area.
- ▶ Do not attempt to extinguish an LNG fire.



5. REFUELLING PROCESS

STEP-BY-STEP INSTRUCTIONS

1ST STEP:

Put on your own personal protective equipment and closed-heel, closed-toe shoes.



2ND STEP:

Read through the filling instructions carefully. Follow the instructions to the letter, taking the vehicle type into account.



3RD STEP:

Start the refuelling process with the ROUTEX card and confirm that you have completed the appropriate training. Select the fuel.



4TH STEP:

Remove the grounding cable and connect it to the vehicle. The vehicle tank must remain grounded throughout the entire refuelling process.



5. REFUELLING PROCESS

STEP-BY-STEP INSTRUCTIONS

5TH STEP:

Exception: Volvo vehicles do not have a special vent valve. Please press the VOLVO button before starting the refuelling process.



6TH STEP:

Check the pressure. If the pressure exceeds 10 bar, the tank must be vented using the vent line.



7TH STEP:

Simply open the vent valve cover on the vehicle tank. All valves must be dry to prevent the moisture from freezing during the refuelling process.



8TH STEP:

Dry all connections with the air blow gun.



5. REFUELLING PROCESS

STEP-BY-STEP INSTRUCTIONS

9TH STEP:

Remove, clean and dry the vent line coupling and connect it to the vent valve.



10TH STEP:

Carefully dry the LNG filler nozzle as well and connect it to the vehicle tank. Push the lever slowly towards the vehicle.



11TH STEP:

The refuelling process cannot begin until the filler nozzle is correctly locked in place and the display shows the LNG price. If '0' appears on the display, please check the position of the filler nozzle.



12TH STEP:

If the pressure exceeds 10 bar, open the vent valve and press START. Once the venting process has completed, 'Fahrzeug vorbereitet' (vehicle ready) will appear.



5. REFUELLING PROCESS

STEP-BY-STEP INSTRUCTIONS

13TH STEP:

Remove the vent line and de-ice the coupling.



14TH STEP:

Start the refuelling process:
Press the START button every 30 seconds.
The refuelling process ends automatically.
The quantity and amount to be paid will appear on the display.



15TH STEP:

Disconnect, de-ice and dry all the refuelling connections. If the tank nozzle is frozen in place, wait until it can be loosened.



16TH STEP:

Close the cover. Disconnect the grounding cable and return it to the designated bracket on the dispenser.
Take your receipt. And you're done!



6. RISKS ASSOCIATED WITH LNG

GENERAL:

1. MAKE SURE THAT THERE ARE NO GAS LEAKS
2. NEVER USE WATER TO CLEAN THE NOZZLE
3. IN THE EVENT OF AN EMERGENCY OR MALFUNCTION, PROCEED TO A SAFE LOCATION IMMEDIATELY

Signs of an emergency/malfunction:

- ▶ Someone has been (seriously) injured
- ▶ There's a larger LNG leak
- ▶ A fire has broken out

Signs of a technical malfunction:

- ▶ The filling station is not functioning as it should

EMERGENCIES/MALFUNCTIONS

1. Press the NOT AUS/ EMERGENCY STOP button on the side of the dispenser
2. Warn others in close proximity
3. Press the yellow call button and proceed to a safe location
4. Keep a safe distance until help arrives



6. RISKS ASSOCIATED WITH LNG

Further risks associated with LNG

- ▶ Highly flammable in gas form
- ▶ Burns and damage to structural elements (brittleness) due to very low temperatures
- ▶ Released LNG is heavier than air (please keep an eye on drains and sewer systems)
- ▶ Risk of explosion in closed spaces (NB: this includes car parks and workshops)
- ▶ Risk of asphyxiation associated with high concentrations

Safety precautions

- ▶ Face the wind (take any gradients into account)
- ▶ Avoid skin contact with liquid/vapour cloud
- ▶ Only use mobile phones, walkie-talkies, pagers, etc. at safe locations

Please be aware of the following signs of an LNG leak

Gas can sink at low temperatures, as it's heavier than air, and mixes with the ambient air as it heats up.

The extent to which LNG is visible as a vapour is dependent on its temperature as well as the temperature and humidity level of the ambient air.

A visible vapour cloud does not necessarily have to contain LNG – it could also be condensation water. LNG is odourless, clear and only visible thanks to the white cloud that forms as the ambient air condenses.

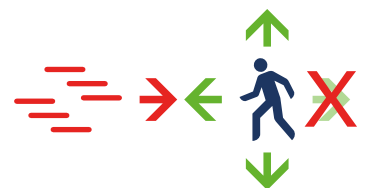
6. RISKS ASSOCIATED WITH LNG

What to do in the event of a fire

- ▶ In the event of a fire, an alarm will sound.
- ▶ All the emergency measures will be activated automatically.
- ▶ If that does not occur quickly enough, press the **NOT AUS/EMERGENCY STOP** button.
- ▶ Do not move or start any vehicles at this time.
- ▶ Inform everyone in close proximity about the potential risk and instruct them to keep their distance.
- ▶ Press the fire alarm system button and inform the station manager via the intercom.
OMV malfunction hotline: +43 (0)1 2119 6411
- ▶ Your message will be automatically forwarded to emergency services.
- ▶ You can also dial 112 for emergency services via the intercom or from a safe location.
- ▶ Whilst protecting yourself, evacuate everyone in close proximity and instruct them to keep their distance.
- ▶ Always leave the premises either facing the wind or at a 90° angle to the wind.



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7. AUTHORISATION

ONLY CERTIFIED DRIVERS ARE PERMITTED TO REFUEL

You can find a link here to the video and the training documents. Once you have viewed, read and understood everything, please sign the attached training protocol and send it to **info.omvcard-obam1@omv.com**.

You thus confirm that you have read everything.

You will then be granted access to LNG refuelling at the Himberg terminal.

LINK OR QR CODE TO THE TRAINING VIDEO



8. VEHICLE INSTRUCTIONS

FAMILIARISE YOURSELF WITH YOUR VEHICLE'S LNG SYSTEM

You should have received instructions upon vehicle delivery.

In the event of an emergency, it's important for you to be able to say where your vehicle's most important LNG system components are located (e.g., shut-off valve and safety valve).

The fuel tank features a safety vent which opens automatically if local pressure builds in the tank. Pressure can build slowly in the tank over longer periods of inactivity. Refuelling on a daily basis keeps tank pressure at a low level. If pressure builds more quickly than usual or if you suspect there may be a malfunction, you will need to check the vehicle and contact your employer.



9. SAFETY AT A GLANCE

Liquefied natural gas (LNG)

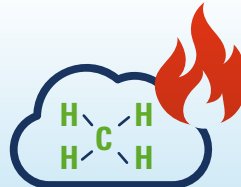
PROPERTIES



Extremely cold (-162°C)



Odourless and clear



Flammable vapour



Asphyxiating vapour

EQUIPMENT



Protective gloves



Face protection



Protective clothing



Sturdy shoes

REFUELLING



Clean the LNG tank connection with the air blow gun



Monitor the refuelling process at all

MALFUNCTION



Report the malfunction to the LNG

9. SAFETY AT A GLANCE

Liquefied natural gas (LNG)

FIRST AID



Skin or eye contact with LNG: wash or rinse with lukewarm water for 15 minutes – call emergency services

AUTOMATIC EMERGENCY STOP



LARGER LEAK OR FIRE



Without automatic NOT AUS/EMERGENCY STOP with sirens and blinking

NOT AUS/EMERGENCY STOP

Press the fire alarm system button or call the fire brigade

Evacuate

KLEINE LECKAGE ODER BRAND



Without automatic NOT AUS/EMERGENCY STOP with sirens and blinking

Inform for instructions LNG operator

Wait for instructions

OMV Downstream GmbH

Trabrennstraße 6–8
1020 Vienna, Austria

Tel: +43 1 40440 26026
info.omvcardsales@omv.com



10. DRIVER

Confirmation of driver training in LNG refuelling.

Concrete confirmation serves as proof of instruction as stipulated in the trade authority's notification from 10 May 2021 (GZ BLW2-BA-2065/001). The owner of the OMV customer number below hereby confirms that his or her drivers have received and read the training documents (training video and training manual) provided by OMV on proper LNG refuelling at the OMV LNG filling station in Himberg (Rauchenwartherstrasse 13a, 2325 Himberg, Austria).

The owner of the OMV customer number undertakes to train and instruct all drivers who have access to the fuel cards associated with the customer number. Instruction and training must be provided by a specialist.

The owner of the customer number undertakes to ensure that only trained personnel will refuel vehicles. These employees need to be able to provide proof that they have been trained on the following content at the very least by a specialist.

- A. NECESSARY PERSONAL PROTECTIVE EQUIPMENT;**
- B. CORRECT REFUELLING PROCESS;**
- C. MEASURES TO BE TAKEN IN THE EVENT OF A MALFUNCTION OR ACCIDENT;**
- D. MEASURES TO BE TAKEN IN THE EVENT OF A MALFUNCTION OR ACCIDENT;**
- E. SAFETY MEASURES.**

The owner of the customer number hereby confirms that the following drivers have undergone instruction and training provided by a specialist. The owner of the customer number shall explicitly prohibit his or her drivers from refuelling without having first undergone the appropriate training. The owner of the customer number is liable for any unauthorised refuelling by drivers associated with the customer number.

OMV Downstream GmbH

Trabrennstraße 6–8
1020 Vienna, Austria

Tel: +43 1 40440 26026
info.omvcardsales@omv.com



10. DRIVER

Confirmation of driver training in LNG refuelling.

With their signature, the driver associated with the customer number and the specialist confirm that training and instruction were provided and that the training documents supplied by OMV Downstream GmbH were used and read.

Driver's first name	Driver's surname	Specialist's name	OMV card number	Town/city, date	Driver's signature	Specialist's signature

OMV customer number	Name/ Company	Owner's customer number	Town/city, date	Owner's signature

The confirmation of driver training in LNG refuelling must be completed in full in electronic form and sent to OMV Downstream by email at the following address prior to the first LNG refuelling process:

info.omvcardsales@omv.com

Training materials on proper refuelling are available at the following link: **www.omv.at/lng**

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